

ABSTRACT

A method is provided for the identification of polymorphic markers in a population.

The method includes genotypically characterizing a first sample of a population, selecting

5 one or more individuals of the first sample based upon the genotypic characterization,

fabricating a microarray with genomic DNA from each individual selected, and genotyping a

second sample of the population using each fabricated microarray as a reference, thereby

identifying the polymorphic markers in the population. Also provided is a method for the

identification of polymorphic markers in a bacterial population. The method includes

10 phenotypically characterizing a first sample of a population, selecting one or more

individuals of the first sample based upon the phenotypic characterization, fabricating a

microarray with genomic DNA from each individual selected, and genotyping a second

sample of the population using each fabricated microarray as a reference, thereby identifying

the polymorphic markers in the population. Also provided is a method for identifying unique

15 bits among a plurality of bit strings including providing a plurality of bit strings, wherein

each string has the same number and position of bits, and each bit has a value of 0 or 1,

generating a graphical representation - including selectable elements - representing the

relatedness of the bit strings, making a selection of a first selectable element, making a

selection of a second selectable element, and identifying bits that are present in each bit string

20 represented by the first selectable element and absent in each bit string represented by the

second selectable element, or vice-versa.